ABSTRACT OF THE DISCLOSURE

A digital magnetic recording/reproducing apparatus includes an LVA (List Viterbi Algorithm) detector which produces first to nth best sequences (n > 1) of a decoded result, and replaces a likelihood ratio and a path memory of the ith best sequence (i=2, 3, ... , n) with those of the (2i-1)th best sequence when contents of path memories of the (i-1)th and ith best sequences are equal to each other and an absolute value of a difference between likelihood ratios of the (i-1)th and (2i-1)th best sequences is smaller than a decision threshold. Alternatively, the LVA detector initializes a likelihood ratio of the ith best sequence to be a likelihood ratio of the (i-1)th best sequence with a constant difference value added thereto when contents of path memories of the (i-1)th and ith best sequences are equal to each other.